Unit 6 Polynomials and Factoring

Content Area: **Math**
Course(s): **Accelerated Algebra I**
Time Period: **Marking Period 3**
Length: **4**
Status: **Published**

Unit Overview

This unit allows students to master arithmetic with polynomial and rational expressions. Students will also see structure in expressions.

Link to optional Desmos Curriculum resource:
https://teacher.desmos.com/collection/61bcc95700581818dff1d4d7?intro-banner-expanded=true

Enduring Understandings

- Monomials can be used to form larger expressions called polynomials.
- Polyomials can be added or subtracted.
- There are several ways to find the prouct of two binomials, including models, algebra, and tables.
- Some trinomials of the form ax^2 + bx + c and some polynomials of a degree greater than 2 aan be factored to equivalent forms which are the product of two binomials.
- THe properties of real numbers can be used to multiply a monomial by a polynomial or simplify the product of binomials
- THe properties of real numbers can be used to factor some trinomials of the form ax^2 + bx + c and some polynomials of a degree greater than 2.

Essential Questions

Can two algebraic expressions that appear to be different be equivalent?

How are the properties of real numbers related to polynomials?

New Jersey Student Learning Standards (No CCS)

MA.A-SSE.A.1a	Interpret parts of an expression, such as terms, factors, and coefficients.
MA.A-SSE.A.1b	Interpret complicated expressions by viewing one or more of their parts as a single entity.
MA.A-SSE.A.2	Use the structure of an expression to identify ways to rewrite it. For example, see $x^4 - y^4$ as $(x^2)^2 - (y^2)^2$, thus recognizing it as a difference of squares that can be factored as $(x^2 -$

$y^2)(x^2 + y^2)$.

MA.A-APR.A.1	Understand that polynomials form a system analogous to the integers, namely, they are closed under the operations of addition, subtraction, and multiplication; add, subtract, and multiply polynomials.

Interdisciplinary Connections

LA.W.9-10.6	Use technology, including the Internet, to produce, share, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.
SCI.HS-ETS1-2	Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.
TECH.8.1.12.C.CS4	Contribute to project teams to produce original works or solve problems.

Technology Standards

TECH.8.1.12.C.CS4	Contribute to project teams to produce original works or solve problems.
TECH.8.1.12.E.CS4	Process data and report results.
TECH.8.1.12.F.CS3	Collect and analyze data to identify solutions and/or make informed decisions.
TECH.8.1.12.F.CS4	Use multiple processes and diverse perspectives to explore alternative solutions.

21st Century Themes/Careers

CAEP.9.2.12.C.3	Identify transferable career skills and design alternate career plans.

Instructional Strategies & Learning Activities

- Use graphing calculator to explore tables.
- Spend time with modeling problems.
- Use problems and activities from book involving modeling problems.
- ~~Provide access to online book~~
- Provide ~~access to~~ book pages and problems through Canvas
- Provide access to review keys
- Use ~~Pearson~~ Quizzes to review and reinforce.
- ~~Provide access to Pearson Review.~~
- ~~Examview~~ Quizzes to assess HW.
- Desmos
- Delta Math

Formative Assessments

- Daily homework checks
- Quiz
- ~~Chapter~~ Unit Test
- ~~Exam View~~ HW Checks
- Warm-ups
- Regular quick quizzes during classes to check students understanding of factoring.
- Desmos
- Delta Math

Summative Assessment

- Unit Test
- Unit Project (Optional)